

CLAIMS

1. A soy-containing dough comprising a flour-based dough and a deflavored soy protein material, wherein the deflavored soy protein material is prepared by a method comprising:

(a) preparing an aqueous composition of a soy material containing soluble soy proteins, flavoring compounds, and insoluble materials;

(b) solubilizing the soy proteins by adjusting the aqueous composition of (a) to a pH in the range of about 9 to about 12 and releasing the flavoring compounds;

(c) passing the pH-adjusted aqueous composition of (b) adjacent an ultrafiltration membrane having a molecular weight cutoff up to about 50,000 Daltons, while maintaining the pH in the range of about 9 to about 12, under suitable ultrafiltration conditions wherein the flavor compounds pass through the membrane, thereby deflavoring the soy material and retaining substantially all of the solubilized soy proteins; and

(d) recovering the solubilized soy proteins retained by the ultrafiltration membrane, wherein the recovered solubilized soy proteins is the deflavored soy protein material.

2. The soy-containing dough of claim 1, wherein the soy material is at least one member of the group consisting of soy milk, soy protein isolate, soy concentrate, and soy flour.

3. The soy-containing dough of claim 1, wherein the deflavored soy protein material used to prepare the dough is in a solid form.

4. The soy-containing dough of claim 2, wherein the aqueous composition of (a) has a concentration of soy material in the range of about 1 to about 20 percent.

5. The soy-containing dough of claim 2, wherein the ultrafiltration membrane has a cutoff in the range of about 1,000 to about 50,000 Daltons.

6. The soy-containing dough of claim 5, wherein the ultrafiltration membrane has a cutoff in the range of about 10,000 to about 30,000 Daltons.

7. The soy-containing dough of claim 2, wherein the ultrafiltration is carried out at a temperature in the range of about 10 to about 60°C and a suitable pressure.

8. The soy-containing dough of claim 6, wherein the ultrafiltration membrane is a polymer, ceramic, or inorganic membrane.

9. The soy-containing dough of claim 2, wherein the soy-containing dough is a pizza dough, a cookie dough, a cracker dough, or a cereal dough.

10. The soy-containing dough of claim 3, wherein the soy-containing dough is a pizza dough, a cookie dough, a cracker dough, or a cereal dough.

11. A soy-containing baked product comprising product prepared from a flour-based dough containing a deflavored soy protein material, wherein the deflavored soy protein material is prepared by a method comprising:

(a) preparing an aqueous composition of a soy material containing soluble soy proteins, flavoring compounds, and insoluble materials;

(b) solubilizing the soy proteins by adjusting the aqueous composition of (a) to a pH in the range of about 9 to about 12 and releasing the flavoring compounds;

(c) passing the pH-adjusted aqueous composition of (b) adjacent an ultrafiltration membrane having a molecular weight cutoff up to about 50,000 Daltons, while maintaining the pH in the range of about 9 to about 12, under suitable ultrafiltration conditions wherein the flavor compounds pass through

the membran , thereby deflavoring the soy material and retaining substantially all of the solubilized soy proteins; and

(d) recovering the solubilized soy proteins retained by the ultrafiltration membrane, wherein the recovered solubilized soy proteins is the deflavored soy protein material.

12. The soy-containing baked product of claim 11, wherein the soy material is at least one member of the group consisting of soy milk, soy protein isolate, soy concentrate, and soy flour.

13. The soy-containing baked product of claim 11, wherein the deflavored soy protein material contained in the dough is in a solid form.

14. The soy-containing baked product of claim 12, wherein the aqueous composition of (a) has a concentration of soy material in the range of about 1 to about 20 percent.

15. The soy-containing baked product of claim 12, wherein the ultrafiltration membrane has a cutoff in the range of about 1,000 to about 50,000 Daltons.

16. The soy-containing baked product of claim 15, wherein the ultrafiltration membrane has a cutoff in the range of about 10,000 to about 30,000 Daltons.

17. The soy-containing baked product of claim 12, wherein the ultrafiltration is carried out at a temperature in the range of about 10 to about 60°C and a suitable pressure.

18. The soy-containing baked product of claim 16, wherein the ultrafiltration membrane is a polymer, ceramic, or inorganic membrane.

19. The soy-containing baked product of claim 12, wherein the soy-containing baked product is a pizza crust, a cookie, a cracker, or a cereal.

20. The soy-containing baked product of claim 13, wherein the soy-containing baked product is a pizza crust, a cookie, a cracker, or a cereal.

21. A method of preparing a soy-containing baked product containing a deflavored soy protein material, said method comprising

(1) preparing a soy-containing dough comprising a flour-based dough and a deflavored soy protein material; and

(2) baking the soy-containing dough to form the soy-containing baked product;

wherein the deflavored soy protein material is prepared by a method comprising:

(a) preparing an aqueous composition of a soy material containing soluble soy proteins, flavoring compounds, and insoluble materials;

(b) solubilizing the soy proteins by adjusting the aqueous composition of (a) to a pH in the range of about 9 to about 12 and releasing the flavoring compounds;

(c) passing the pH-adjusted aqueous composition of (b) adjacent an ultrafiltration membrane having a molecular weight cutoff up to about 50,000 Daltons, while maintaining the pH in the range of about 9 to about 12, under suitable ultrafiltration conditions wherein the flavor compounds pass through the membrane, thereby deflavoring the soy material and retaining substantially all of the solubilized soy proteins; and

(d) recovering the solubilized soy proteins retained by the ultrafiltration membrane, wherein the recovered solubilized soy proteins is the deflavored soy protein material.

22. The method of claim 21, wherein the soy material is at least one member of the group consisting of soy milk, soy protein isolate, soy concentrate, and soy flour.

23. The soy-containing baked product of claim 22, wherein the decaffeinated soy protein material contained in the dough is in a solid form.

24. The method of claim 22, wherein the aqueous composition of (a) has a concentration of soy material in the range of about 1 to about 20 percent.

25. The method of claim 22, wherein the ultrafiltration membrane has a cutoff in the range of about 1,000 to about 50,000 Daltons.

26. The method of claim 25, wherein the ultrafiltration membrane has a cutoff in the range of about 10,000 to about 30,000 Daltons.

27. The method of claim 22, wherein the ultrafiltration is carried out at a temperature in the range of about 10 to about 60°C and a suitable pressure.

28. The method of claim 26, wherein the ultrafiltration membrane is a polymer, ceramic, or inorganic membrane.

29. The method of claim 22, wherein the soy-containing baked product is a pizza crust, a cookie, a cracker, or a cereal.

30. The method of claim 23, wherein the soy-containing baked product is a pizza crust, a cookie, a cracker, or a cereal.